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OPINIONS OF FARMERS' TOWARDS RURAL ROAD IMPROVEMENT FOR AGRICULTURAL COMMUNITIES: A CASE STUDY OF RIBAUE DISTRICT, NAMPULA PROVINCE, MOZAMBIQUE.

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ABSTRACT

This study was aimed to examine opinions of farmers' towards rural road improvement for agricultural communities, and to identify on how farmers use the rural road in their daily life and agricultural production. The quantitative method was applied to achieve the objectives. Where multi-stage sampling method and structured interview were used to collect data from 142 farmers in five villages of Ribaue district, named Cunlé, Namiconha, Iapala, Riane and Ribaue – sede, Nampula Province, Mozambique. Four categories as demographic household information, socio-economic information of households, farmer opinion towards rural road condition and expectation to the future improvement and opinions on participation in rural road improvement of local farmer was used to examine opinions of farmers' towards rural road improvement for agricultural communities, selection of farmers were a head of households of those villages using systematic random sampling method. Data analysis was conducted by using computer program, Statistical Package for Social Sciences (SPSS for Windows) and descript statistic method to analyses data such as frequency count, percentages, maximum, minimum and mean were used. The results showed that more than three quarter of farmers' opinions interviewing stated that improving the rural road to agricultural production areas would help to access to the market, job creation, basic social services (Education and Health), and increasing the productivity and consequently reducing transportation costs. It was recommended that in order to improve rural road policy, local government and local administration must focus on increasing the rate of skilled personnel, the community facilitator and local leaders with the skills needed to work in a participatory manner with rural road committee at local area and the central government should increase the flow of funds allocation to support the needs and therefore, should be awareness of national government in local participation.

Keywords: Rural Road, Participation, Road maintenance, Agricultural Market, Routes

I. INTRODUCTION

Roads in many African countries are poor condition due to scarcity of rehabilitation of the road has become increasingly problem in many of developing countries that can see same reasons, 1) many farmers are wavering to increase a negotiable over production in their crops because it cannot be sold else their increases of expense of transport difficulty and significantly due to the reduces the returns to labour; 2) insufficient innovation and low agricultural productivity related to reduced and weak extension services and information and inputs do not reach range easy to the farmers; 3) education absenteeism is high and is low enrolment of farmers' children at school (often among teachers a well as children) and 4) the health care is low partner because hospitals are hard to reach and health labour cannot go easily to their job (Terafe 2012).

Infrastructure of road mainly rural provides basic inputs for socio-economic development of the rural communities. The provision and construction of roads and road links support multiple socio-economic advantages to the rural communities and results in forming a strong backbone for the agro-based economy (Sama 2000). For example, the road it also increase in price of agricultural production, restructure in crops and livestock as well as new job opportunities creation. Social impact of rural roads were mentioned in the case of easier to access to social services such as better care, higher quality education, improving social relationships and the availability of public utilities (World Bank 1996).

Generally, sensitivity to road problems has grown substantially giving rise to an environment in which its overall importance and that of its particular state of conservation, is visibly recognized. The interest of the private sector and of the users for the problematic of roads grew it is also expected, in the short term, to play a management of the road network, particularly its maintenance. The road sector, however, continues to be affected by various constraints, namely: human and financial resources, administrative rules and maintenance of roads (Word Bank 2010). Despite the growth of its technical staff, public management bodies of the roads, still have many young and inexperienced staff, to make planning and management of the roads, where they are confronted daily with donors, consultants and contractors, who have more experienced and better equipped technicians (Word Bank 2010).

A. Objective of The Study

This research objectives were:

1. To examine the opinions of farmers towards the rural road improvement for agriculture communities and

2. To identify on how farmers use rural road in their daily life and agricultural production.

II. METHODOLOGY

The study was conducted Ribaue District, Province, located in the western part of Nampula province, with a road extension of 560 km2. And border with four districts of Murrupula, Malema, Lalaua, and Mecuburi with total area of 6.281 Km2, and the population is estimated to 328.411 people. Ribaue is the highest agricultural producer district in Nampula Province, which produce around 500.675,2 tons by season, for different crops the Simple Random sampling, were used to select the District, purposive sampling to select five villages (Cunle, Ribaue-sede, Iapala, Namiconha and Riane), and systematic sampling method were used to choose 142 households head. Data were statistically analysed and described. Were used quantitative approach. The data was analysed using in SPSS for Windom programme, descriptive method, frequency counts, and percentages, mean, minimum and maximum.

III. RESULTS AND DISCUSSION

A. Analysing Some Demographics Information Of Households

The summary of selected characteristic of farmers' households that given opinions is shown in table1. The summary shows that the average of age of them was 43.20 years, implies that the most of the farmers in the study area are in their middle age and ranged between 21 to 68 years. 81.0% of the responds head of households were male and 19.0% were female. Education qualification of the farmer shows that majority of the respondents (71.1%) were attended the primary school and 28.2 and 0.7% of them had secondary school and high school respectively. The household size average equals 4 people. More than half of respondents 57.1%, were practice agriculture as a way of life and 37.3 and 5.6 % of them respectively. Households experience in agriculture activities was ranged

from 4 to 32 years (14.53 years on average) implied that most of the farmers have been practices agriculture activities for a long period of time.

Table1. Demographics Information Of Households

(n=142)

Item	Frequency	Percentage (%)
1. Age group (Years)		
< 30	13	9.2
31- 40	46	32.4
41 – 50	49	34.5
51 – 60	32	22.5
>60	2	1.4
Min= 21, Max= 68, Mean= 43.20		
2. Sex		
Male	115	81.0
Famale	27	19.0
3. Marital status		
Single	40	28.2
Married	92	64.8
Divorced	6	4.2
widow	4	2.8
4. Education Level		
Primary School	101	71.1
Secondary School	40	28.2
High School	1	0.7
5. Occupation		
Farmer	124	87.3
Part time farmer	0	0.0
Business	8	5.6
Work (teacher & Public servant)	7	4.9
Others	3	2.1
6. Family size		
< 3	2	1.4
4 - 6	82	57.7
>7	58	40.8
Min =1 ; Max= 11 ; Average =5.54		
7. Years practicing agriculture (Years)		
<5	5	3.5
5 – 9	24	16.9
10 – 14	40	28.2
15 – 19	38	26.8
20 – 24	22	15.5
25 – 29	10	7.0
>29	3	2.1
Min =4 ; Max=32 ; Average =15.09		

The first source of income of the households were crops accounted of 88.0%, implies that the main source of incomes in the study area is agricultural activities.

B. Uses The Road By Farmers In Daily Life

According to the data obtained from the opinion of the households showed in table2, the average of distances travelled by the farmer to the various places such as house to farm; house to school; house to hospital and house to market were 8.5 kms, implies that the farmer spend more time to reach those place, and the time average of members of households were travelling for those places was 5 a week, it's mainly from house to farm, school and market places. The distance walked by the farmer to reach his farm is subdivided into 4 to 5 sections according to the routes, more than half families (59.2%) used the route which the distances are less than 10 kms,it shows that the farmers have to have transportation to carry their belongs before go to field. Also the results revealed that 38% of families had family member who walked between 6 to 10 kms to reach the school. It implies that they have to eat before go to school, consequently, it influences to achieve good results at school and also good health. Regarding to the results shown in the table2, 31.0 % of the families walked between 11 and 20 kms long to reach a health unit for health care, while 28.2% of the HH were walk less than 10 kms. The survey showed that half of households (50.7%) walk less than 8 kilometres to find a market. These results are accordant to the results of researcher Terefe, 2012.

Table 2: Use the road by farmers in daily life

Route	Frequency (142)	Percentage (%)
House to farm (kms)		
< 10	84	59.2
11 - 20	24	16.9
21 - 30	15	10.6
31 - 40	14	9.9
> 40	5	3.5
Max = 45; Min = 0.02; Mean =3.59		
House to School (kms)		
<5	45	31.7
6 – 10	54	38.0
11- 15	28	19.7
>15	15	10.6
Max = 17; Min = 1; Mean=3.95		
House to Hospital (kms)		
< 10	40	28.2
11 – 20	44	31.0
21 – 30	30	21.1
31 – 40	12	8.5
> 40	11	7.7
Max = 48; Min = 1; Mean=8.85		
House to Market (kms)		
< 8	73	51.2
9 – 16	25	17.6
17 - 24	23	16.4
25 - 32	15	10.6
> 32	6	4.2
Max = 39; Min = 1; Mean=5.54		

Opinion Of Farmers Towards Rural Road Improvement

The study defined criteria to analysis the opinions of farmers individual based on 3 categories as width of surface, type of surface, and maintenance. The household had a very big expectation related to width surface on all sections, mainly the routes from house to school (69.0% of respondents) and from house to hostipal (71.1% of farmers) where their hope a better improvement, more than 5 meters width consider seriously more significant where the cars can across and can overrun each other's as well . Respondents indicate explicitly regarding the importance to improve rural road by uses the gravel and cement surface of road. For this improvements the cost of transportation to take persons and goods to the market will be low. Furthermore, it would be easy to have access to the basic services such as education, local administration, extension agent, and hospital.

1. Opinions' Of Farmers' Towards Maintenance Of Road

With regarding to maintenance, the results shows that farmer stated that the minimum of times to perform maintenance per year should be twice for all the routes highlighting whether routes from house to school, house to hospital and from house to market with 99.3, 99.3 and 100%, respectively.

Table3. Expectation of farmers towards maintenance of road in the future

Routes	One time a year		Two times a year		Total	
	Count	%	No	%	Count	%
1 Route house to farm	8	5.6	134	94.4	142	100
2 Route house to school	1	0.7	141	99.3	142	100
3 Route house to Hospital	1	0.7	141	99.3	142	100
4. Route house to Market	0	0	142	100.0	142	100

2. Opinions Of Farmers Towards Width Of Road

From the table4 the results revealed that 71.1%, 69.0 and 65.5 percent of farmers' opinion respectively desire to see the widened width above 5 meters. The mainly on routes house to hospital, house to school and home to market. It implies that with these width transportations can directly linked to the another rural or urban areas and also can travel comfortable, supported by Hussain and Xu, 2017.

Table 4: Expectation of farmers towards width of road in the future

Item	**Less than 5**		**More than 5**		**Total**	
	No	**%**	**No**	**%**	**No**	**%**
1. Route house to farm	113	79.6	29	21.4	142	100.0
2 Route house to school	44	31.0	98	69.0	142	100.0
3 Route house to Hospital	41	28.9	101	71.1	142	100.0
4 Route house to Market	49	34.5	93	65.5	142	100.0

3. Opinions Of Famers' Towards Surface Of Road

The data collected and presented in table 5 shows that most of farmer were expect that the surface was gravel and cement, mainly the rural road in followed routes from house to hospital, house to school and house to market. This results implies that with this surface farmers can use a car to carry their goods to the market place, and also, there can have access to public transportation, or the farmers can move more easily to a service or activities, idea supporting with (Fukubayashi & Kimura).

Table 5: Expectation of farmers towards surface of road in the future

Item	Gravel		Asphalt		Cement		Earth Soil		Total	
	No	%	No	%	No	%	No	%	No	%
1 Route house to Farm	64	45.1	1	0.7	9	6.3	68	47.9	142	100.0
2 Route house to School	62	43.7	21	14.8	55	38.7	4	2.8	142	100.0
3 Route house to Hospital	53	37.3	19	13.4	68	47.9	2	1.4	142	100.0
4 Route house to Market	55	38.7	15	10.6	71	50.0	1	0.7	142	100.0

IV. CONCLUSION AND RECOMMENDATION

The results showed that the opinion of farmers after this study and there were the significant changes in rural road approach, changes in daily life in terms of access of social services such as education and health care, with education, the benefits it was consider that with convent road, the children can attended the class more easier, fully and punctual, using public transportation or go to school by bicycle. For the health, improving rural road brings more benefits in particularly highlight access to health services and enhancing health status of households/local people. The study revealed that with improvement the farmers get more benefits mainly on education and health, and in case of impassability of the rural access roads will also hampers the provision of those social services (health, education and information). Therefore, it is recommended that:

i. In order to improve rural road policy, local government and local administration must focus on increasing the rate of skilled personnel, technical expert, community facilitator and local leaders with the skills needed to work in a participatory manner with rural road committee at local area.

ii. The central government should increase the flow of funds allocation to support the needs and therefore, should be awareness of local participation.

iii. Good road should be constructed for agricultural communities and credit facilities should be provide for the rural people to improve their production level, which will lead to increase in their living standard.

iv. Shall other researchers can use this study as reference to start up point for future more studies

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